34. A method of processing data on a computer comprising the steps of:

(a) selecting an active region from a data area on said computer;

(b) representing said active region as a graphic on a display;

(c) altering a portion of said data area included in said active region by altering a dimension of said graphic by a first user selected direct interaction of a cursor and said graphic; and

(d) altering said data included in said active region to change a scale of an object visible on said display by a second user selected interaction of said cursor with said graphic, wherein said manipulator interacts directly with said graphic to said enable said scale alteration.

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REMARKS

The title has been amended, as suggested by the Examiner. The applicant notes that some claims do not require all the elements recited in the title.

Claim 38 has been canceled, as suggested by the Examiner, to avoid a potential double patenting rejection.

Claims 5, 6, 10, and 11 have been amended to clarify the language, as suggested by the Examiner.

Claims 7, 17, 22, 32, and 33 have been amended to provide clearer antecedent basis.

The Examiner rejected claims 1-5 under 35 U.S.C. Sec. 102(e) as being anticipated by Sciammarella et al., U.S. Patent No. 6,320,599.

Sciammarella et al. disclose a system whereby various objects are selectively enlarged or reduced in size on a screen using a zooming operation. At least three marks are displayed to provide a visual indication of the limits for zoom-in and zoom-out operations. The first and second marks indicate limits for enlarging and decreasing a picture, respectively, while the third mark indicates a position of the current screen display with respect to the displayed limits for the zoom-in and zoom-out operations. See Sciammarella et al., abstract, and FIG. 3.

Sciammarella et al. teach that when the user selects the zoom-in or zoom-out operation, three sets of marks 122, 124, 126 are provided on the display screen 102 as shown in FIG. 3. The first set 122 is zoom-in marks which indicate a limit for the zoom-in operation on the display screen 102, and the second set 126 is zoom-out marks which indicate a limit for the zoom-out operation. The third set 124 is position indicating marks for providing a visual indication of the current position of the display screen 102 with respect to the marks 122, 126. See Sciammarella et al., column 3, lines 26-34.

Sciammarella et al. further teach that the user, via the input device 112, positions the cursor 116 on a portion 118 (a so-called toolbar) on the display screen 102 as illustratively shown in FIG. 2. From the toolbar, a zoom operation may be selected by moving the cursor 116 to an appropriate item in a pull-down menu, such as a sub-menu 120, and clicking on "ZOOM-IN" of the sub-menu 120, for example, as shown in FIG. 2.

Accordingly, Sciammarella et al. teach using the traditional technique for interacting with objects on the display, namely, navigating the menus on a toolbar to achieve the desired zooming within the display screen.

Claim 1 has been amended to patentably distinguish over Sciammarella et al. by claiming that the manipulator interacts directly with the graphic representation to enable the alteration of the scale of an object. Sciammarella et al. fail to suggest direct interaction with the graphic representation. Further, the Sciammarella et al. reference is primarily directed to including a set of graphical marks to indicate zooming limits and accordingly does not suggest including additional functionality within the system to support direct interaction with the graphical representation.

Claims 2-6 depend from claim 1 and are patentable for the same reasons asserted for claim 1.

The Examiner rejected claims 7-32 and 34-39 under 35 U.S.C. Section 103(a) over Gest et al., U.S. Patent No. 5,333,247, in view of Sciammarella et al., U.S. Patent No. 6,320,599.

Gest et al. disclose a tool for a display system comprising means for superimposing a box on a portion of a buffer of data visible on a display; the box being representative of the size and location of the visible portion with respect to the whole of the buffer. By the provision of means for interacting with the scroll box the user is provided with a

user-friendly manner of scrolling around a document in a plurality of directions. The scroll tool is much more convenient to use than conventional scroll bars and does not take up unnecessary screen real estate. See Gest et al., abstract. Accordingly, Gest et al. teach the use of a scroll tool to provide interaction with a scroll box to select different portions of the buffer for viewing as opposed to conventional scroll bars. In essence, Gest et al. merely teach a different interface for scrolling data within a window, such as a word processor like Microsoft Word.

The Examiner notes that Gest et al. do not teach altering the scale of an object by interaction of the manipulator and the graphic representation having a dimension approximately equal to a limit. The Examiner then indicates that the scaling of objects within limits is known in the art. The Examiner further suggests including the teaching of Sciammarella et al. of zooming scale indicators with the system of Gest et al.

The applicant respectfully disagrees with the applicability of the Examiner's suggested combination of references and the resulting interface. While the applicant agrees that the scaling of objects within limits is known in the art, it is the applicant's position that such scaling is performed using a menu driven system or otherwise an external command to the object themselves. Such a system is exemplified by Sciammarella et al. using a menu driven zooming function, as previously described. Accordingly, there is no suggestion in the references, nor general scaling techniques in the art, of zooming an object in the manner claimed by direct interaction with the object itself.

Claim 7 has been amended to patentably distinguish over Sciammarella et al. by claiming that the manipulator interacts directly with the graphic representation to enable the alteration of the scale of an object. Sciammarella et al. fail to suggest direct interaction with the graphic representation. Also, the Sciammarella et al. reference is primarily directed to including a set of graphical marks to indicate zooming limits and accordingly does not suggest including additional functionality within the system to support direct interaction with the graphical representation. Further, Gest et al. fail to properly suggest interaction directly with the graphic representation to alter the scale of the object, nor does the combination of Gest et al. and Sciammarella et al. suggest interaction directly with the graphic representation to alter the scale of the object.

Claims 8-11 depend from claim 7 and are patentable for the same reasons asserted for claim 7.

Claim 12 has been amended in a manner similar to claim 1 and is patentable for analogous reasons asserted for claim 1.

Claims 13-16 depend from claim 12 and are patentable for the same reasons asserted for claim 12.

Claim 17 has been amended to patentably distinguish over Gest et al. in view of Sciammarella et al. by claiming the combination of a positioning tool, a sizing tool, and a scaling tool enabling the user to alter a scale of an object displayed by the computer by interaction of the scaling tool with the graphical representation having a size approximately equaling the limit, wherein the scaling tool interacts directly with the graphic representation to enable scale alteration.

As an initial matter Sciammarella et al. fail to disclose a scaling tool apart from the menu, and further direct interaction of the scaling tool with the graphic representation to enable scale alteration. Also, the Sciammarella et al. reference is primarily directed to including a set of graphical marks to indicate zooming limits and accordingly does not suggest including additional functionality within the system to support direct interaction with the graphical representation. Further, Gest et al. fail to properly suggest interaction directly with the graphic representation to alter the scale of the object, nor the inclusion of a scaling tool, nor does the combination of Gest et al. and Sciammarella et al. suggest interaction of a scaling tool directly with the graphic representation to alter the scale of the object.

In addition, as discussed in the specification at page 6, line 19, to page 7, line 2, to make effective use of the computer, the user should be able to move the window relative to the information area so that all regions of the virtual information area are visible and available for the object manipulation provided by the program. Movement of the window relative to the information area is accomplished by scrolling which effectively moves the information area under the window. Likewise, the user may wish to zoom in or out, effectively moving closer or further away from the information area, to view different levels of detail. Scrolling and zooming are actions which are often performed contemporaneously, but controlled by separate, remotely located controls making rapid switching between modes difficult and frustrating. The present inventors realized that it would be easier to use the computer if scrolling and zooming could be accomplished by directly altering the position and size of an active portion of the information area displayed in the window with a simple manipulator.

Claim 17 further patentably distinguish over Gest et al. in view of Sciammarella et al. by claiming the combination of a positioning tool wherein the positioning tool interacts directly with the graphic representation to enable moving the active region; a sizing tool wherein said sizing tool interacts directly with the graphic representation to enable the size alteration, a scaling tool wherein the scaling tool interacts directly with the graphic representation to enable the scale alteration.

There is not suggestion in Gest et al. that the claimed functions such as scrolling and zooming, which are actions which are often performed contemporaneously, but controlled by separate, remotely located controls making rapid switching between modes difficult and frustrating, should be combined in some manner. In fact, if such claimed functions were to be combined traditional skill in the art would suggest that they be controlled by remotely located controls, such as the scroll bars and pull-down menu selections. This is in direct contrast to the claimed direct interaction between the graphic representation and the corresponding tool.

Claims 18-21 depend from claim 17 and are patentable for the same reasons asserted for claim 17.

Claim 22 has been amended in a manner similar to claim 17 and is patentable for analogous reasons asserted for claim 17.

Claims 23-27 depend from claim 22 and are patentable for the same reasons asserted for claim 22.

Claim 28 has been amended to patentably distinguish over Gest et al. in view of Sciammarella et al. by claiming the combination of altering a portion of the data area included in the active region by altering a dimension of the graphic between a plurality of limits by direct interaction of a cursor and the graphic and altering the data included in the active region to change a scale of an object visible on the display by interaction of the cursor with the graphic having the dimension approximately equal to the limit, wherein the manipulator interacts directly with the graphic representation to enable the scale alteration.

As an initial matter Sciammarella et al. fail to disclose altering the scale of the graphic apart from the menu, and further direct interaction of a cursor with the graphic. Also, the Sciammarella et al. reference is primarily directed to including a set of graphical marks to indicate zooming limits and accordingly does not suggest including additional functionality within the system to support direct interaction with the graphical representation. Further, Gest et

al. fail to properly suggest interaction directly with the graphic representation to alter the scale of the object, nor does the combination of Gest et al. and Sciammarella et al. suggest interaction of the cursor with with the graphic representation to alter the scale of the object.

In addition, as discussed in the specification at page 6, line 19, to page 7, line 2, to make effective use of the computer, the user should be able to move the window relative to the information area so that all regions of the virtual information area are visible and available for the object manipulation provided by the program. Movement of the window relative to the information area is accomplished by scrolling which effectively moves the information area under the window. Likewise, the user may wish to zoom in or out, effectively moving closer or further away from the information area, to view different levels of detail. Scrolling and zooming are actions which are often performed contemporaneously, but controlled by separate, remotely located controls making rapid switching between modes difficult and frustrating. The present inventors realized that it would be easier to use the computer if scrolling and zooming could be accomplished by directly altering the position and size of an active portion of the information area displayed in the window with a simple manipulator.

Claim 28 further patentably distinguish over Gest et al. in view of Sciammarella et al. by claiming the combination of altering a portion of the data area included in the active region by altering a dimension of the graphic between a plurality of limits by direct interaction of a cursor and the graphic, and altering the data included in the the active region to change a scale of an object visible on the display by interaction of the cursor with the graphic having the dimension approximately equal to the limit, wherein the manipulator interacts directly with the graphic representation to enable the scale alteration.

There is not suggestion in Gest et al. that the claimed functions such as scrolling and zooming, which are actions which are often performed contemporaneously, but controlled by separate, remotely located controls making rapid switching between modes difficult and frustrating, should be combined in some manner. In fact, if such claimed functions were to be combined traditional skill in the art would suggest that they be controlled by remotely located controls, such as the scroll bars and pull-down menu selections. This is in direct contrast to the claimed direct interaction between the graphic representation and the cursor.

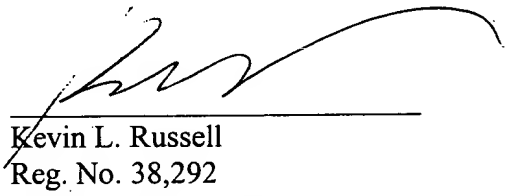
Claims 29-33 depend from claim 28 and are patentable for the same reasons asserted for claim 28.

Claim 34 has been amended in a manner similar to claim 28 and is patentable for analogous reasons asserted for claim 28.

Claims 35-37 and 39-41 depend from claim 34 and are patentable for the same reasons asserted for claim 34.

The Examiner is respectfully requested to reconsider claims 1-37 and 39-41, in view of the forgoing amendments and remarks, and to pass the application to issue.

Respectfully submitted,



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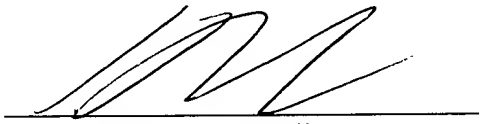
Dated: April 30, 2002



Kevin L. Russell

APPENDIX

1. A computer implemented graphical user interface comprising a manipulator enabling alteration of a scale of an object displayed by a computer by altering a dimension of a graphic representation of an active region of data on said computer, said dimension being approximately equal to a limit, wherein said manipulator interacts directly with said graphic representation to said enable said alteration.

5. The [computer implemented] graphical user interface of claim 1 wherein said computer on which said interface is implemented is a personal computer.

6. The [computer implemented] graphical user interface of claim 1 wherein said computer on which said interface is implemented is a handheld electronic device.

7. A computer implemented graphical user interface comprising a manipulator enabling a user of a computer to alter a size of an active region of an information area on said computer between a plurality of limits by interaction of said manipulator with a dimension of a graphic representation of said active region and to alter a scale of an object displayed by said computer by interaction of said manipulator and said graphic representation having said dimension approximately equal to [a] said limit, wherein said manipulator interacts directly with said graphic representation to said enable said alteration.

10. The [manipulator] graphical user interface of claim 7 further enabling a user to move said active region relative to said information area by a second interaction of said manipulator and said graphic representation.

11. The [manipulator] graphical user interface of claim 7 wherein said interaction of said manipulator and said graphic representation is accomplished with a mouse.

12. A computer implemented graphical user interface comprising a manipulator enabling a user to alter a size of an active region of an information area on said

computer by a first user selected interaction with a graphic representation of said active region and to alter a scale of an object displayed by said computer by a second user selected interaction with said graphic representation, wherein said manipulator interacts directly with said graphic representation to said enable said alteration.

17. A computer implemented graphical user interface comprising:

(a) a graphic representation of an active region of an information area;

(b) a positioning tool enabling [said] a user to move said active region relative to said information area by a first user selected interaction of said positioning tool with said graphic representation, wherein said positioning tool interacts directly with said graphic representation to said enable said move said active region;

(c) a sizing tool enabling said user to alter a size of said active region between a plurality of limits by a second user selected interaction of said sizing tool with said graphic representation, wherein said sizing tool interacts directly with said graphic representation to said enable said size alteration; and

(d) a scaling tool enabling said user to alter a scale of an object displayed by said computer by interaction of said scaling tool with said graphical representation having a size approximately equaling [a] said limit, wherein said scaling tool interacts directly with said graphic representation to said enable said scale alteration.

22. A computer implemented graphical user interface comprising:

(a) a graphic representation of an active region of an information area;

(b) a positioning tool enabling [said] a user to move said active region relative to said information area by a first user selected interaction of said positioning tool with said graphic representation, wherein said positioning tool interacts directly with said graphic representation to said enable said move said active region;

(c) a sizing tool enabling said user to alter a size of said active region by a second user selected interaction of said sizing tool with said graphic representation, wherein said sizing tool interacts directly with said graphic representation to said enable said size alteration; and

(d) a scaling tool enabling said user to alter a scale of an object displayed by said computer by a third user selected interaction of said scaling tool with said graphical representation, wherein said manipulator interacts directly with said graphic representation to said enable said scale alteration.

28. A method of processing data on a computer comprising the steps of:

(a) selecting an active region from a data area on said computer;

(b) representing said active region as a graphic on a display;

(c) altering a portion of said data area included in said active region by altering a dimension of said graphic between a plurality of limits by direct interaction of a cursor and said graphic; and

(d) altering said data included in said active region to change a scale of an object visible on said display by interaction of said cursor with said graphic having said dimension approximately equal to a said limit, wherein said manipulator interacts directly with said graphic representation to said enable said scale alteration.

32. The [computer implemented graphical user interface] method of claim 28 wherein said computer on which said interface is implemented is a personal computer.

33. The [computer implemented graphical user interface] method of claim 28 wherein said computer on which said interface is implemented is a handheld electronic device.

34. A method of processing data on a computer comprising the steps of:

(a) selecting an active region from a data area on said computer;

(b) representing said active region as a graphic on a display;

(c) altering a portion of said data area included in said active region by altering a dimension of said graphic by a first user selected direct interaction of a cursor and said graphic; and

(d) altering said data included in said active region to change a scale of an object visible on said display by a second user selected interaction of said cursor with said graphic, wherein said manipulator interacts directly with said graphic to said enable said scale alteration.